

WHAT IS CLAIMED IS:

1. A thermal printer for recording an image on thermosensitive recording material fed in a first direction, said recording material having first and second lateral edges extending in said first direction, said thermal printer comprising:

a thermal head for applying heat to said recording material to record said image by one line, said thermal head having a heating element array of plural heating elements arranged in a second direction crosswise to said first direction, said heating element array having at least one end disposed outside said first lateral edge;

an edge detecting sensor for detecting said first lateral edge;

heating element determination means, responsive to an output from said edge detecting sensor, for determining N edge region heating element included in said heating elements, opposed to said recording material, and disposed close to said first lateral edge, where N is an integer;

a controller for controlling driving of said edge region heating element, so as to suppress color development of said edge region heating element in at least one predetermined line on said recording material.

2. A thermal printer as defined in claim 1, wherein said edge detecting sensor comprises a line sensor having plural pixels arranged at a pitch of arrangement of said heating elements.

3. A thermal printer as defined in claim 2, wherein said heating element array includes outer heating elements disposed outside said first lateral edge, and said

controller suppresses driving of said outer heating elements.

4. A thermal printer as defined in claim 3, further comprising a recording material guide mechanism for guiding
5 said second lateral edge.

5. A thermal printer as defined in claim 3, wherein N is in a range of 3-9.

6. A thermal printer as defined in claim 3, wherein said at least one predetermined line comprises plural lines
10 with odd numbers or even numbers as counted serially.

7. A thermal printer as defined in claim 3, wherein said at least one predetermined line comprises M2 adjacent line next to M1 adjacent lines, where M1 is an integer of at least two, and M2 is an integer of at least one.

15 8. A thermal printer as defined in claim 7, wherein M1 and M2 are determined according to average density in a region in said image associated with said edge region heating element.

9. A thermal printer as defined in claim 7, wherein
20 M1 and M2 are determined according to average density in a portion in said image included in a region associated with said edge region heating element.

10. A thermal printing method of recording an image on thermosensitive recording material fed in a first
25 direction, said recording material having first and second lateral edges extending in said first direction, wherein a thermal head applies heat to said recording material to record said image by one line, said thermal head having a heating element array of plural heating elements arranged
30 in a second direction crosswise to said first direction, said heating element array having at least one end disposed

outside said first lateral edge, said thermal printing method comprising steps of:

detecting said first lateral edge;

in response to detecting said first lateral edge,
5 determining N edge region heating element included in said heating elements, opposed to said recording material, and disposed close to said first lateral edge, where N is an integer;

controlling driving of said edge region heating
10 element, so as to suppress color development of said edge region heating element in at least one predetermined line on said recording material.

11. A thermal printing method as defined in claim 10, wherein N is in a range of 3-9.

15 12. A thermal printing method as defined in claim 10, wherein said at least one predetermined line comprises plural lines with odd numbers or even numbers as counted serially.

13. A thermal printing method as defined in claim 10,
20 wherein said at least one predetermined line comprises M2 adjacent line next to M1 adjacent lines, where M1 is an integer of at least two, and M2 is an integer of at least one.

14. A thermal printing method as defined in claim 13,
25 wherein M1 and M2 are determined according to average density in a region in said image associated with said edge region heating element.

15. A thermal printing method as defined in claim 13,
wherein M1 and M2 are determined according to average
30 density in a portion in said image included in a region associated with said edge region heating element.

16. A thermal printer, including a thermal head for recording an image on thermosensitive recording material by one line, said thermal head having a heating element array of plural heating elements arranged in one direction, for
5 generating heat energy according to image data, said thermal printer comprising:

there being a recording material temperature sensor for measuring temperature of said recording material; and

a controller for controlling said heat energy of said
10 heating elements according to said temperature.

17. A thermal printer as defined in claim 16, wherein said controller changes a commonly used voltage for being applied to said heating elements according to said temperature.

15 18. A thermal printer as defined in claim 16, wherein said thermal head thermally records yellow, magenta and cyan color images on said recording material by frame-sequential recording.

19. A thermal printer as defined in claim 18, wherein
20 said controller controls said heat energy for respectively said color images according to said temperature measured shortly before recording of respectively said color images.

20. A thermal printer as defined in claim 19, wherein
25 said recording material temperature sensor is included in said recording material, and data of said temperature is transmitted to said controller by use of wireless transmission.

21. A thermal printing method in which a thermal head records an image on thermosensitive recording material by
30 one line, said thermal head having a heating element array of plural heating elements arranged in one direction, for

generating heat energy according to image data, said thermal printing method comprising steps of:

measuring temperature of said recording material; and
controlling said heat energy of said heating elements
5 according to said temperature.

22. A thermal printing method as defined in claim 21, wherein in said controlling step, a commonly used voltage for being applied to said heating elements is changed according to said temperature.

10 23. A thermal printing method as defined in claim 21, wherein said thermal head thermally records yellow, magenta and cyan color images on said recording material by frame-sequential recording.

24. A thermal printing method as defined in claim 23,
15 wherein said heat energy is controlled for respectively said color images according to said temperature measured shortly before recording of respectively said color images.

25. A thermosensitive recording material for a thermal printer, comprising:

20 a support;

at least one thermosensitive coloring layer overlaid on said support; and

a recording material temperature sensor for measuring temperature of said recording material, wherein data of
25 said temperature is transmitted to said thermal printer by use of wireless transmission.

26. A thermosensitive recording material as defined in claim 25, wherein said recording material temperature sensor is disposed on said support.